- a) a monolithic substrate having a substrate surface with a plurality of teeth extending therefrom, each tooth having a contoured surface,
- b) a layer comprising superabasive grains, the layer being chemically bonded to at least a portion of the surface of each tooth to define a plurality of cutting levels parallel to the substrate surface, and each cutting level on each tooth being oriented such that a portion of each cutting level overlaps at least a portion of each other cutting level of the tooth; and\_
- c) [an initial] a first uppermost cutting level comprising superabrasive grains and successive uppermost cutting levels among the plurality of cutting levels of each tooth; whereby after the [initial] first uppermost cutting level has been worn away by cutting a workpiece, each successive uppermost cutting level of the tooth presents to the workpiece a ring of superabrasive grain around the contoured surface of the tooth, and substantially all superabrasive grain within the ring simultaneously engages in cutting.
- 28. (twice amended) An abrasive cutting tool comprising:
- a) a monolithic substrate having a substrate surface with a plurality of teeth extending therefrom, each tooth having a contoured surface,
- b) a layer comprising abrasive grains, the layer being chemically bonded to at least a portion of the surface of each tooth to define a plurality of cutting levels parallel to the substrate surface, and each cutting level on each tooth being oriented such that a portion of each cutting level overlaps at least a portion of each other cutting level of the tooth; and\_
- c)[an initial] a first uppermost cutting level comprising superabrasive grains and successive uppermost cutting levels among the plurality of cutting levels of each tooth; wherein the substrate surface has an intended direction of movement, wherein at least a portion of each tooth has a face which is inclined at a negative angle with respect to the intended direction of